UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DEVAKI WILLIAMS, as Conservator of HP., a Protected Person,

Plaintiff,

Case No. 17-CV-13118

vs.

HON. GEORGE CARAM STEEH

UNITED STATES OF AMERICA,

Defendant.
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FINDINGS OF FACT AND CONCLUSIONS OF LAW

This is a medical malpractice action wherein plaintiff, Devaki Williams, as the duly appointed Conservator acting on behalf of her daughter H.P., alleges that obstetrician Dr. Mayra Troya-Nutt ("Troya") negligently managed the shoulder dystocia that arose during the delivery of H.P. on October 16, 2014. This case was initially filed in Wayne County Circuit Court against various defendants. However, because Dr. Troya, the delivering and attending obstetrician, was employed by Detroit Community Health Connection ("DCHC"), a federally funded clinic, she was deemed a government employee and this Court has exclusive jurisdiction over this matter pursuant to the Federal Tort Claims Act ("FTCA"), 28 U.S.C. § 1346(b)(1); 42 U.S.C. § 233 (a) and (c). The case was removed to this Court and the United States of America was substituted as the defendant.

Plaintiff alleges that Dr. Troya, or another physician under her supervision, applied excessive traction during the delivery of H.P. Plaintiff's theory is that excessive

downward or rotational traction caused H.P.'s brachial plexus complex to be stretched, which resulted in severe and permanent damage to the nerves. Plaintiff contends that, as a result of defendant's negligence, H.P. sustained a severe and permanent disability involving her left arm and hand.

A bench trial was held beginning on January 13, 2020 and concluding on January 22, 2020. The Court commends counsel for their professionalism in this difficult case. Both sides have submitted proposed findings of facts and conclusions of law, which the Court has thoroughly considered. Now therefore, for the reasons stated below, judgment in this case shall enter for defendant.

## FINDINGS OF FACT

Dr. Troya was born in Panama City, Panama. She graduated medical school with distinction in 1978. She completed a four-year obstetrics residency in Paris, France, and another four-year obstetrics residency in the United States at Wayne State University. Dr. Troya has delivered thousands of infants during her career. Before the delivery of H.P., she had faced thousands of obstetrical emergencies and more than a hundred shoulder dystocias. She is a board-certified obstetrician and a fellow of the American College of Obstetrics and Gynecology ("ACOG").

At the time of the delivery in this case, Dr. Troya was an employee of DCHC, a federally funded community health clinic providing free or low cost medical care to uninsured and underinsured individuals in Detroit. DCHC provides prenatal and obstetric care as part of its services. Prenatal care is provided at DCHC clinics; however, DCHC obstetricians perform deliveries at local hospitals. When a DCHC

obstetrician performs a delivery at a local hospital, the residents, technicians, pediatricians, and other staff are employed by the hospital.

Devaki Williams began pre-natal care for her pregnancy with H.P. at DCHC in April of 2014. At that time, Williams was 21 years old and this was her second pregnancy. Williams' pregnancy was considered "high-risk" due to "obesity." Despite this, her prenatal course was unremarkable.

**A. First Stage of Labor**

On October 16, 2014, Williams presented to Detroit Medical Center for delivery shortly before 1 pm. During the first stage of labor, Williams' contractions were irregular, so Dr. Troya administered a minimal dosage of Pitocin. Williams received an epidural at 6:05 pm to alleviate pain during labor. At 8:10 pm, Dr. Layan Al-Rahmani artificially ruptured Williams' membrane and noted that the amniotic fluid was stained by meconium. Meconium in the amniotic fluid may indicate that the child is under stress in the womb.

At the time of the delivery, Dr. Al-Rahmani was the Executive Chief Resident. She had performed "a couple hundred" deliveries before the delivery in this case. Subsequent to the delivery in this case, Dr. Al-Rahmani completed a fellowship in high-risk pregnancies at the Mayo Clinic. She is a board-certified obstetrician and a member of ACOG.

According to the progress notes, at 9:30 pm and 10:15 pm, plaintiff reported to Dr. Sharif Sakr that she was experiencing an increased urge to push. Dr. Sakr completed medical school and an obstetrics residency in Egypt before coming to the

United States. Before the delivery in this case, Dr. Sakr conducted a post-doctoral fellowship in obstetrics at Yale, followed by two years of an obstetrics residency at Wayne State University. Dr. Sakr testified he had performed over a thousand deliveries at the time of the delivery in this case. Dr. Sakr is a board-certified obstetrician and a member of ACOG. As the third-year obstetrics resident on duty on the night of the delivery in this case, Dr. Sakr was responsible for monitoring the fetal heart graphs for all laboring patients on the delivery floor and responding to triage calls.

The progress notes indicate that at 10:45 pm, Dr. Troya examined Williams and "educated [her] not to push prematurely." At 11 pm, Williams experienced another increased urge to push.

**B. Second Stage of Labor**

At 11:37 pm, Dr. Troya examined Williams and found that she was "complete" or ready to begin pushing. This was the beginning of Williams' second stage of labor. The average second stage of labor is approximately 24 minutes, though it can last two to three hours. Dr. Troya paged the delivery team, which typically includes the first-year resident, the nurse, and sometimes includes the pediatrician and a more senior resident. In this case, the pediatrics team was paged for a high-risk delivery because Williams' amniotic fluid had been stained by meconium. The delivery team also included Chief Resident Dr. Al-Rahmani and resident Dr. Aliye Runyan, who arrived at the delivery room at 11:42 pm. William's mother, Mary Cannon, and the father of the baby were also present in the delivery room and initially assisted during the delivery by holding Williams' legs.

Dr. Runyan was a first-year obstetrics resident who had begun her residency approximately three months before the delivery. At that time, she had performed approximately 15 deliveries. With Williams continuing to push, the child crowned at 11:45pm. After crowning, the fetal heart rate rose to 180 beats per minute, which is known as tachycardia. A minute later, the child's head delivered spontaneously. Dr. Troya and Dr. Runyan were between Williams' legs preparing to deliver the child. Dr. Runyan testified that Dr. Troya was "just right next to" her because "she knew that [Dr. Runyan] was so new." After delivery of the head, Dr. Runyan placed "one hand on either side of the head and [tried to] gently follow the natural path as the baby is delivered by maternal effort," which is what she "would have done in any delivery." However, when trying to guide the child out, she met some resistance. When she met resistance, she stopped and let Dr. Troya know that she could not complete the delivery.

Dr. Runyan, who has performed several hundred deliveries since the delivery of H.P., testified that she "definitely did not" pull harder when she encountered resistance and she did not "twist or turn the baby's head." Before she turned the delivery over to Dr. Troya, she "was probably using less traction than [she] technically should have" because "she had not done very many deliveries at that time" and "was not super confident." Dr. Troya testified that she was watching Dr. Runyan as she tried to deliver the child and did not see her use "any unusual amount of traction."

**C. Shoulder Dystocia and Brachial Plexus Injury**

When the head delivered, Dr. Troya observed a "turtle sign," which is when the baby's head retracts quickly back into the perineum. Dr. Troya recognized that the turtle sign may indicate a shoulder dystocia and testified that she "removed Dr. Runyan right away." Dr. Troya then performed "gentle downward" traction, to test if this was a true shoulder dystocia. Dr. Runyan observed Dr. Troya perform traction when testing the shoulder dystocia and testified that Dr. Troya's traction was "not any harder than anyone would [use] in any other delivery" and she did not use "excessive traction". When Dr. Troya's standard gentle traction did not deliver the child, she diagnosed a shoulder dystocia.

ACOG describes shoulder dystocia as an unpredictable and unpreventable obstetric emergency. Shoulder dystocia means that the shoulder of the infant is wedged under the mother's pubic symphysis, also referred to as the public bone, during delivery. Typically, during the second stage of labor, the infant's shoulders rotate as they proceed down the birth canal. During a shoulder dystocia, the child's shoulder is caught behind the mother's pubic bone and cannot be released using the customary gentle downward traction. Shoulder dystocias are relatively rare and occur in three to seven percent of deliveries. The condition seems to be more common when the second stage of labor occurs quickly or when the infant is large.[1] When there is a shoulder dystocia, additional maneuvers are required to complete the delivery.

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[1] The evidence showed that H.P. weighed 4,440 grams at birth, which is greater than the 97th percentile for birth weight. The second stage of labor was very short,

A shoulder dystocia is a traumatic event with recognized risks to the mother and child, even when the obstetrician manages the condition properly. The primary concern is the risk of brain injury to the child. Depending on the child's condition going into the shoulder dystocia, a physician has between six to seven minutes to complete the delivery before becoming concerned about a brain injury due to hypoxia. Because of the risk of brain damage, it is within the standard of care to break an infant's arm to resolve a shoulder dystocia. A shoulder dystocia presents other risks to the child, including clavicular fractures, humeral fractures, Horner's Syndrome, torticollis, and brachial plexus injuries. The risks to the mother include a fracture of the pelvis, a laceration, a postpartum hemorrhage or a ruptured uterus.

Neonatal brachial plexus palsy is an injury that has a high association with shoulder dystocia. Dr. Robert DeMott testified that about half of neonatal brachial plexus injuries occur during deliveries when there is a shoulder dystocia. The brachial plexus is a complex and delicate bundle of nerves that supports all motor function, sensory function and autonomic function in the arm and hand. The brachial plexus comprises the C5, C6, C7, C8 and T1 nerve roots. The C5 nerve root supports the muscles around the shoulder. The C6 nerve root primarily supports elbow flexion and contributes to wrist extension. The C7 nerve root primarily supports elbow extension. Both the C8 and T1 nerve roots support hand function.

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lasting no more than nine minutes, excluding the four or five minutes due to the shoulder dystocia.

A brachial plexus palsy ("BPP") is a condition that occurs when the nerve roots of the brachial plexus are injured by being stretched or torn. Excessive traction applied laterally (by bending the fetal neck downward greater than 45 degrees from the cervical thoracic spine) or rotationally, in the face of a shoulder dystocia, stretches the brachial plexus, can cause permanent brachial plexus injury, and is a violation of the standard of care during a shoulder dystocia delivery. It is plaintiff's theory that this is what happened to H.P. during her delivery.

The ACOG-accepted maneuvers for delivering a baby when there is a shoulder dystocia are described below. There is no prescribed order in which they should be performed, and several maneuvers can be performed at the same time.

- McRoberts: During this procedure the mother's legs are hyperflexed tightly to the abdomen, with the knees back toward her shoulders. Typically, two people assist, one on each leg, to deflect the angle of the pubic bone. This position flattens the mother's spine and slightly opens the pelvis. Once in position, the delivering physician should apply gentle downward traction to determine if the procedure released the fetal shoulder.
- Suprapubic Pressure: During this procedure pressure is applied slightly above the pubic bone on the baby's shoulder to roll the baby's shoulder over and decrease the diameter of the shoulder to achieve delivery. At this time, gentle application of downward traction should be applied to see if suprapubic pressure worked to release the shoulder. It has been estimated that the

combination of McRoberts and suprapubic pressure resolves between 60 and 90 percent of shoulder dystocias.

- Delivery of the Posterior Arm: During this procedure, the delivering physician puts his or her hand in the vagina to grab the elbow of the posterior arm to deliver that arm, thereby making room for the anterior shoulder to be delivered.

**D. Preparation for Shoulder Dystocia Maneuvers**

In response to the shoulder dystocia, Dr. Troya called for help using an overhead paging system. Dr. Sakr and a staff-attending obstetrician, Dr. Rehab Mohsen Shabana, responded to Dr. Troya's request for help. Next, Dr. Troya told Williams to stop pushing so that she could check for a nuchal cord and to prevent further impaction of the child's shoulder into the mother's pubic bone. However, Williams began to panic, and despite Dr. Troya's and Dr. Al-Rahmani's instructions otherwise, Williams continued to push. When a mother continues to push during a shoulder dystocia, it makes the shoulder dystocia more difficult to resolve because it further impacts the child's shoulder against the pubic bone.

Dr. Troya attempted to get Williams to position herself at the bottom edge of the bed and to flex her knees back towards her shoulders. However, Williams was not cooperative and was moving away from the edge of the bed. Dr. Troya tried to calm Williams down, but she and the other doctors had trouble getting Williams to stop pushing and into the proper position throughout the remainder of the shoulder dystocia.

**E. McRoberts and Suprapubic Pressure**

While attempting to get Williams to stop pushing and into the proper position, Dr. Troya began maneuvers to resolve the shoulder dystocia. Dr. Troya began with three actions simultaneously—the McRoberts maneuver, suprapubic pressure, and gentle downward traction. To complete the maneuvers, Dr. Al-Rahmani and at least two other doctors held Williams' legs and placed her into the proper position. Dr. Shabana and Dr. Al-Rahmani applied suprapubic pressure by pressing their hands on Williams' abdomen below her belly button. By pushing down and over they attempted to roll the anterior shoulder down and forward to create more room in the pelvis so the shoulder could slide under the bone. Dr. Troya applied "gentle traction" in combination with McRoberts and suprapubic pressure. Unfortunately, these maneuvers did not resolve the shoulder dystocia.

**F. Episiotomy**

When McRoberts and suprapubic pressure did not release the child's shoulder, Dr. Troya performed an episiotomy. An episiotomy does not release a shoulder dystocia itself, but it creates more room so a doctor can try to deliver the posterior arm. Because Williams was moving on the bed, Dr. Troya had to hold her still with one arm while she performed the episiotomy.

**G. Delivery of the Posterior Arm**

Next, Dr. Al-Rahmani tried to deliver the child's posterior arm. This maneuver requires the doctor to reach behind the baby's head to find and flex the elbow. Then the doctor brings the arm over the baby's head, so it is outside the pelvis. However,

Dr. Al-Rahmani was not able to deliver the posterior arm because Williams is a large woman and Dr. Al-Rahmani is short and her hands could not reach H.P.'s elbow. Dr. Sakr, who is taller than Dr. Al-Rahmani, was able to deliver the posterior arm by reaching behind the baby's head, flexing the elbow, and sweeping the baby's arm over its head. While Dr. Sakr was delivering the posterior arm, Dr. Troya helped keep Williams still so he could perform the maneuver. After delivering the posterior arm, Dr. Sakr pushed on the posterior shoulder to help move the anterior shoulder out from under the pelvic bone. This is referred to as the "Wood's screw maneuver." After that maneuver, Dr. Sakr and Dr. Troya hooked their hands under the baby's armpits and gently slid the rest of the body out, avoiding applying traction to the baby's head.

**H. Delivery**

H.P. was delivered at approximately 11:50 pm. The nursing notes indicate that the shoulder dystocia lasted approximately four minutes, while the pediatrician's History and Physical indicate the shoulder dystocia lasting for at least five minutes. Four to five minutes is considered to be a long shoulder dystocia. For example, Dr. David Plourd testified that he faced approximately 250 shoulder dystocias in his career and did not recall any lasting more than four minutes.

**I. Resuscitation**

After delivery, Dr. Troya lifted H.P. under her arms and carried her to the pediatrician. H.P. was blue and flaccid, she was not breathing, and her heart rate had fallen to less than 60 beats per minute. The normal range is over 100 beats per minute. Dr. Lua, the pediatrician, tried to resuscitate H.P. using bag and mask

ventilation. When bag and mask ventilation was not successful, Dr. Lua attempted to place an endotracheal tube. However, he could not place the endotracheal tube because H.P. had aspirated thick meconium. Dr. Lua returned to providing bag and mask ventilation and administered Neopuff.

Despite the resuscitation efforts, H.P. did not take her first breath until four minutes after the delivery. Once she began breathing, her condition improved and Dr. Lua transferred her to the neonatal intensive care unit. Dr. Lua noted weakness in H.P.'s left arm.

**J. Discharge**

An occupational therapist evaluated H.P.'s left arm the day after the delivery, and Dr. Bajaj, a pediatrician and neonatologist, examined H.P. on her fourth day of life and discharged her from the hospital. Dr. Bajaj diagnosed left arm paresis (weakness) following shoulder dystocia and brachial plexus injury. Dr. Bajaj referred Williams and H.P. to occupational therapy for left-arm weakness.

**K. Surgery**

On May 27, 2015, Dr. Lynda Yang, a neurosurgeon specializing in neonatal brachial plexus injuries, performed surgery on H.P.'s brachial plexus nerves. The surgery revealed that one of H.P.'s nerves was ruptured and three were avulsed. Dr. Yang performed a grafting procedure to repair the rupture and the avulsions and to improve function in the muscles controlling H.P.'s left arm. After surgery, H.P. was placed in a brace and referred to physical occupational therapy.

**L. Post-Surgery Care**

H.P. attended occupational therapy in 2015 to improve the use of her left arm and hand. Beginning in May of 2016, H.P.'s primary care physician, Dr. Treece, referred H.P. back to occupational therapy multiple times. However, Williams had difficulty getting H.P. to therapy appointments and H.P. has not completed a course of occupational therapy since she was eighteen months old. Williams did testify that she attempted to perform therapy exercises with H.P. at home. According to H.P.'s occupational therapist, Kelly Malec, OTRL, if H.P. had attended occupational therapy as prescribed, the expectation is that she would have met 80 percent of her therapy goals and been more independent with her self-care and needs. However, at the time of H.P.'s last discharge from occupational therapy for poor attendance, she had achieved "zero out of 5 long-term goals."

CONCLUSIONS OF LAW

Under the FTCA, 28 U.S.C. §§ 1346 (b), 2401(b), and 2671–2680, the United States may be held liable for personal injury caused by the negligent or wrongful act or omission of a federal employee under circumstances where the United States, if a private person, would be liable to the claimant according to the law of the place where the act or omission occurred. 28 U.S.C. § 1346(b). Because the allegedly negligent acts or omissions in this case occurred in Michigan, the United States' liability in this case will largely be determined by reference to Michigan law; however, the FTCA supersedes Michigan law in some respects. See 28 U.S.C. §§ 1346(b)(1), 2674–79.

In Michigan, "[a] civil action for malpractice may be maintained against any person professing or holding himself out to be a member of a state licensed profession [and t]he rules of the common law applicable to actions against members of a state licensed profession, for malpractice," apply to determine the professional's liability, unless addressed specifically by statute. M.C.L. § 600.2912. Plaintiff has the burden to establish: (1) the applicable standard of care; (2) breach of that standard of care by the defendant; (3) injury; and (4) proximate causation between the alleged breach and the injury. *Woodard v. Custer*, 473 Mich. 1, 6 (Mich. 2005). See also M.C.L. § 600.2912a.

**A. Standard of Care**

To prove a breach of the standard of care, "plaintiff has the burden of proving that in light of the state of the art existing at the time of the alleged malpractice . . . [t]he defendant . . . failed to provide the recognized standard of practice . . . within that specialty as reasonably applied in light of the facilities available in the community." M.C.L. § 600.2912a(1)(b). In this case, the medical experts agree on the general standard of care for an obstetrician managing a shoulder dystocia. The experts disagree as to whether the standard of care was breached in this case and whether such a breach was a proximate cause of the injuries suffered by H.P.

**1. Maneuvers**

The standard of care when there is a shoulder dystocia requires that the obstetrician must first call for help and instruct the mother to stop pushing. Next, the obstetrician should begin applying maneuvers to resolve the shoulder dystocia, typically beginning with the McRoberts position and suprapubic pressure. If McRoberts and suprapubic pressure are unsuccessful, the obstetrician may perform an episiotomy and move to a rotational maneuver, such as delivery of the posterior arm. There is no dispute that Dr. Troya and the delivery team responded to the shoulder dystocia by performing the recommended maneuvers in this case and plaintiff's experts are not critical of that part of their care.

**2. Non-Compliant Patient**

When an obstetrician is confronted with a non-compliant patient during a shoulder dystocia, both plaintiff's expert, Dr. Plourd, and defendant's expert, Dr. DeMott, agree that the standard of care requires the obstetrician to do their best under those circumstances.

**3. Traction**

The experts agree that an obstetrician should use their normal amount of downward traction after each maneuver during a shoulder dystocia to test if the maneuver was effective in dislodging the child's shoulder. (*See*, Plourd, ECF No. 90-1, PageID. 4949).

**B. Breach of Standard of Care**

**1. Non-Compliant Patient**

At trial, there was evidence that Williams was pushing when the medical team instructed her not to, and that she was moving her body around on the bed while staff tried to perform the shoulder dystocia maneuvers. The medical team had to address these issues with Williams during the delivery. Neither Dr. Troya, nor anyone else, blamed Williams for her failure to follow Dr. Troya's instructions during the shoulder dystocia. By all accounts, the situation was stressful and the anxiety felt by Williams was not unusual. Dr. DeMott testified that under the circumstances, Williams' reaction to the emergency was understandable. Nevertheless, Williams' failure to follow Dr. Troya's instructions made Dr. Troya's attempts to resolve the shoulder dystocia more difficult. For example, Dr. Troya had to hold Williams in place with one hand while she performed an episiotomy and directed the obstetrics residents to perform the proper shoulder dystocia maneuvers. Dr. Troya ultimately delivered H.P. alive and without brain damage. Under the circumstances, it is clear that Dr. Troya complied with the standard of care by doing her best when presented with a non-compliant patient.

**2. Traction**

Plaintiff's theory is that Dr. Troya, or one the physicians working under her supervision, breached the standard of care by applying excessive downward lateral traction or rotational traction at some point during the delivery. Dr. Plourd and Dr. Fred Duboe opined that Dr. Troya or another obstetrician applied between 44 and 88 pounds of force on H.P.'s head during the delivery, but "probably closer to 88" pounds. (Plourd, ECF No. 90-1, PageID.4932:23–4933:3; Duboe, ECF No. 84, PageID.4313:23–4314:11). These experts testified that the normal amount of traction applied during delivery is 10 to 12 pounds or less. They also claim that the alleged excessive traction was applied either laterally, by bending the neck downward greater than 45 degrees, or rotationally.

Plaintiff's experts rely on the testimony of witnesses who were present at the delivery, the fact of the injury itself, and medical literature to support their opinions.

**a. Eyewitness Testimony**

Mary Cannon, Williams' mother, testified that after H.P.'s head was delivered, the doctors struggled to get H.P.'s body out. At trial, Cannon described Dr. Troya pulling down on H.P.'s head and tugging with such force that it caused Williams to move back and forth on the bed. However, at her earlier-taken deposition, Ms. Cannon testified

that after the shoulder dystocia was diagnosed, she had to step back from Williams as the medical team took over and surrounded Williams. She testified that from her position in the room at that time, she was not able to see what was Dr. Troya was doing, however she did see Williams holding onto the sides of the bed and moving up and down. Ms. Cannon also testified that at some point during the delivery more than three doctors had to hold Williams' legs in position.

Given Cannon's deposition testimony that she was not in a position to see what Dr. Troya was doing after the shoulder dystocia was diagnosed, Cannon's testimony that Troya was pulling and tugging on H.P.'s head so forcefully that it caused Williams to move up and down on the bed is not credible. On the other hand, Ms. Cannon was consistent in her testimony that Williams was moving on the bed and needed more than three doctors to hold her legs in position. Ms. Cannon's testimony does not support a conclusion that Dr. Troya or another obstetrician applied excessive downward lateral or rotational traction in violation of the standard of care.

Plaintiff also cites to the testimony of Dr Runyan and Dr. Troya, where each referred to applying gentle downward lateral traction. The doctors used the phrase "downward lateral traction" to mean the angle that follows "the natural path as the baby is delivered by maternal effort. (*See* Runyan, ECF No. 99-1, PageID.5492). Plaintiff's experts described the same angle as "axial" or "in line with the fetal spine" or "usually within 30 to 45 degrees in line with the fetal spine" or "downward." (*See* Duboe, ECF No. 84, PageID.4277–4278; Plourd, ECF No. 90-1, PageID. 4949).

The evidence at trial showed there were only three attempts at traction during this delivery and all of them were "gentle," performed using the standard delivery posture, and did not involve rotation of the child's neck or traction at an unusual angle. The first was by Dr. Runyan, who testified that she applied less than the normal amount of traction at the usual angle. The second was by Dr. Troya to test if the delivery was complicated by a true shoulder dystocia after she had observed the turtle sign. Prior to this delivery, Dr. Troya had resolved thousands of obstetric emergencies in her career and testified that she knew that extra traction would not resolve a shoulder dystocia. When Dr. Troya first applied traction, the delivery had only been delayed by a matter of seconds. Therefore, there is no reason to doubt Dr. Troya's and Dr. Runyan's testimony that Dr. Troya's first attempt at traction was gentle and at the normal angle.

The third attempt at traction occurred after doctors performed the McRoberts and suprapubic pressure manuevers simultaneously. Based on the nursing notes, this attempt likely occurred within 2 minutes of Dr. Troya diagnosing the shoulder dystocia. Dr. Troya described this attempt at traction as "gentle" and with her typical amount of effort. This is consistent with Dr. Sakr's testimony that typically, with suprapubic pressure and McRoberts combined, when the maneuvers are effective the baby starts to come down without using any traction. Given Dr. Troya's level of experience and the fact that there was still another maneuver to try, there is no basis to doubt Dr. Troya's testimony regarding the amount of force she used.

The evidence did not reveal any other attempts at traction during the shoulder dystocia. Dr. Al-Rahmani did not apply traction after she attempted to deliver the posterior arm and Dr. Sakr lifted the child from under the arms after he completed his maneuvers.

Throughout the trial, plaintiff examined or cross-examined numerous individuals who were in the delivery room during the shoulder dystocia. Dr. Troya, Dr. Runyan, Dr. Al-Rahmani, Dr. Lua, and the delivery nurse, Kristyn King, were all in the delivery room for the entire delivery. Each of them has performed or witnessed hundreds of deliveries. Each was asked if they saw anyone use any unusual amount of traction during this delivery or if they saw anyone pull the child's head at an unusual angle and each of them said that they did not.

Dr. Sakr and Dr. Shabana entered the delivery room after Dr. Troya diagnosed the shoulder dystocia. They were each asked if they saw anyone use any unusual traction—each of them said that they did not. There is no testimony from any fact witness suggesting that Dr. Troya, Dr. Runyan, or anyone else used excessive traction during the delivery, let alone 4 to 8 times the usual amount of traction. Rather, the testimony showed that Dr. Troya and the other obstetricians used a normal amount of traction during the delivery of H.P.

**b. Res Ipsa Loquitur**

Dr. Plourd and Dr. Duboe both testified that in the absence of another cause for H.P.'s permanent brachial plexus palsy, greater than 40 pounds of force must have

been applied during delivery for H.P. to sustain the permanent injuries to her brachial plexus.

Several state and federal courts have decided medical malpractice cases involving claims that excessive clinician-applied traction during a shoulder dystocia caused a neonatal brachial plexus injury. These courts have held that a plaintiff cannot meet their evidentiary burden by relying only on the fact of the brachial plexus injury itself. *See, e.g., Kawache v. United States*, No. 08-3128, 2011 WL 441684, *5, 7 (E.D.N.Y. February 7, 2011) aff'd 471 Fed. App'x 10 (2nd Cir. 2012); *Araoz v. United States*, No. 06-2149, 2008 WL 11449314 (D.N.J. March 24, 2008) aff'd 337 Fed. App'x 207 (3rd Cir. 2009); *Lawrey v. Good Samaritan Hosp*., 751 F.3d 947, 953 (8th Cir. 2014); *Madrigal v. Mendoza*, 639 F. Supp. 2d 1026, 1032 (D. Ariz. 2009); *Johnson v. St. Barnabas Hosp*., 52 A.D.3d 286, 287–88 (N.Y. App. Div. 2008); *Hawkins v. OB-GYN Assoc*., 290 Ga. App. 892, 894 (Ga. Ct. App. 2008); *Sturgis v. Bayside Health Ass'n Chartered*, 942 A.2d 579, 588 (Del. 2007); *Rieker v. Kaiser Found. Hosps*., 96 P.3d 833, 837 (Or. Ct. App. 2004).

For instance, in *Kawache*, an obstetrician performed the proper maneuvers to resolve a shoulder dystocia and denied using excessive traction, but the child suffered a permanent brachial plexus injury during the delivery. *Kawache*, 2011 WL 441684, *5, 7, 13. No eyewitness testified that the physician used excessive traction and there was no circumstantial evidence such as "the doctor placing one foot on the table and pulling back, violently pulling, or twisting and rotating of the baby's

head." *Id*. at *5–7, 11. Nonetheless, the plaintiffs' expert alleged that, "the very fact that [the baby] suffered a permanent brachial plexus injury indicated that excess lateral traction was employed." *Id*. at *12. After a bench trial, the district court rejected the plaintiffs' theory because the peer-reviewed medical literature indicated that maternal forces could also have caused the injury and, without any other evidence of excessive traction, the plaintiffs could not meet their burden of proving medical negligence. *Id*. at *16; *see also Araoz*, 337 Fed. App'x 207; *Johnson*, 52 A.D.3d at 287–88; *Hawkins*, 290 Ga. App. at 894.

While these cases are not from this jurisdiction and therefore do not have precedential weight, their reasoning is persuasive. In this case, all of the credible eye-witness testimony supports the conclusion that none of the doctors used excessive downward lateral or rotational traction on H.P.'s head during the delivery. In addition, as described below in the Causation section of this opinion, the medical literature indicates that natural maternal forces during labor can cause brachial plexus injuries. Therefore, the fact of the brachial plexus injury itself is not enough to conclude that the delivering obstetrician must have been negligent.

**c. Medical literature on traction**

Finally, plaintiff's experts testified that they relied on medical literature recognizing that doctors underestimate the amount of force they use during delivery. They contend that studies have shown physicians apply twice as much force in the execution of shoulder dystocia than in a normal delivery. (Plourd, ECF 90-1,

PageID.4897-4898). Additionally, when the delivery physician is standing, as Dr. Troya was in this case, there is a tendency to use their body weight to apply increased traction. (Duboe, ECF 84, PageID.4297). The Court does not question the conclusions of the studies cited by the expert witnesses, however the application to this case is tenuous. Neither of plaintiff's experts can identify when the alleged excessive traction occurred, how many times it was applied, whether it was lateral or rotational, or who applied the excessive traction. Nor can plaintiff's experts explain how Dr. Troya—a woman just over five-feet tall and 100 pounds in her late 60s—could have applied 40 to 88 pounds of force during the delivery without conspicuously abandoning the normal posture for delivering an infant. Without evidence in support, these experts' opinions that excess traction, beyond the standard of care, was used and was the cause of injury are not helpful to the trier of fact.

There is no dispute that Dr. Troya performed the recommended maneuvers to resolve the shoulder dystocia. There is also no credible dispute that Dr. Troya did her best to resolve a severe shoulder dystocia while managing a non-compliant patient. Finally, there is no evidence in the record indicating that any obstetrician applied excessive traction during the delivery. Accordingly, plaintiff has failed to demonstrate that Dr. Troya or any of the obstetricians under her supervision breached the standard of care in this case.

**C. Proximate Causation**

"In an action alleging medical malpractice, the plaintiff has the burden of proving that he or she suffered an injury that more probably than not was proximately caused by the negligence of the defendant or defendants." M.C.L. § 600.2912a(2). With respect to medical causation, "[a] valid theory of causation [] must be based on facts in evidence." *Craig ex rel. Craig v. Oakwood Hosp*., 684 N.W.2d 296, 309 (Mich. 2004). "And while the evidence need not negate all other possible causes, [the Michigan Supreme] Court has consistently required that the evidence exclude other reasonable hypotheses with a fair amount of certainty." *Id*. (quotations omitted).

Here, the parties agree that brachial plexus injuries during a shoulder dystocia are caused by stretch forces. The parties disagree about what caused the stretch forces in this case. Plaintiff argues that obstetrician-applied traction caused the stretch on H.P.'s brachial plexus nerves and relies on the fact that several of H.P.'s brachial plexus nerves were permanently injured. (Plourd, ECF No. 90-1, PageID.4869:6–:21; Duboe, ECF No. 84, PageID.4299:16–:24). Defendant presented evidence that maternal forces caused the stretch in this case based on the large size of the child, the short second stage of labor, the fact of the shoulder dystocia itself, which was prolonged, severe, and involved uncontrolled maternal pushing, as well as the lack of evidence of any unusual obstetrician-applied traction in the medical records or the testimony of the witnesses. (DeMott, ECF No. 86, PageID.4592:20–4594:22; Grimm, ECF No. 87, PageID.4707:5–4708:2, 4718:6–16). As described below, the obstetrics

community has rejected plaintiff's theory of causation and no evidence supports plaintiff's experts' arguments.

**1. Medical Literature**

Michigan courts generally reject medical causation theories when an expert's "opinion [i]s contradicted by the opinion of the [opposing] expert and published literature on the subject [i]s admitted into evidence, which even the expert acknowledge[s] as authoritative; and there [i]s no literature supporting the testimony of [the] expert admitted into evidence." *See Elher v. Misra*, 878 N.W.2d 790, 798 (Mich. 2016) (citing *Edry v. Adelman*, 786 N.W.2d 567, 571 (Mich. 2010)).

Consistent with Michigan law, the analysis must begin with the scientific literature admitted at trial. At trial, portions of the ACOG 2014 monograph on shoulder dystocia and neonatal brachial plexus palsy were admitted into evidence. Every obstetrician involved in this case was a member of ACOG during their clinical obstetrics practice. Every obstetrician in this case, including Dr. Plourd and Dr. Duboe, agreed that most obstetricians follow ACOG practice guidelines and ACOG is generally the most authoritative source on obstetric issues.

ACOG's 2014 monograph was created by experts in the fields of obstetrics, pediatrics, neurology, and biomechanical engineering. Each member of the task force ACOG convened to create the monograph specialized in the study of shoulder dystocia and neonatal brachial plexus palsy. The authors of the monograph reviewed all available peer-reviewed literature on the issue and ranked that literature based on

the strength of its evidence. Plaintiff's experts do not dispute that the ACOG monograph is the most authoritative source of scientific literature on the issues of shoulder dystocia and brachial plexus injury.

The ACOG monograph directly addresses the dispute in this case. The portions of the monograph admitted at trial demonstrate that during a shoulder dystocia, "[a]n impaction of one of the shoulders will not eliminate the force transmitted from the [mother's] pelvis to the spine." (DeMott, ECF No. 86, PageID.4581:5–:14 (quoting the ACOG monograph)). "Therefore, if a shoulder is restrained, maternal forces will continue to move the head and neck forward, widening the angle between the neck and shoulder, and causing traction on the brachial plexus." (*Id*. (quoting the ACOG monograph)). According to the monograph, this mechanism may cause transient and permanent cases of neonatal brachial plexus palsy. (*Id.*, PageID.4584:17–:25 ("there is insufficient scientific evidence to support a clear division between the causative factors of transient NBPP versus persistent NBPP.") (quoting the ACOG monograph)).

The authors of the monograph found "[n]o published clinical or experimental data [] to support the contention that the presence of persistent . . . NBPP implies the application of excessive force by the birth attendant." (DeMott, ECF No. 86, PageID.4585:16–4586:1 (quoting the ACOG monograph); Grimm, ECF No. 87, PageID.4726:20–4727:3 (quoting the ACOG monograph)). And, "[i]n addition to research within the obstetric community, the pediatric, orthopedic and neurologic

literature now stress that the existence of NBPP following birth does not, a priori, indicate the exogenous forces are the cause of this injury." (DeMott, ECF No. 86, PageID.4586:1–:13 (quoting the ACOG monograph)).

Other scientific literature admitted at trial is consistent with the ACOG monograph's conclusion. The medical database UpToDate states that "the forces of labor, fetal position, and maternal pushing may be sufficient to cause excessive traction on the brachial plexus and fetal bones." (DeMott, ECF No. 86, PageID.4583:11–4584:13 (quoting UpToDate); PageID.4584:14–:25 ("The forces of uterine contraction and maternal pushing, alone, are probably sufficient to cause excessive traction on the brachial plexus.") (quoting UpToDate)). UpToDate also cautions that "[i]t is important to note that neonatal morbidity can occur even when shoulder dystocia is managed appropriately." (DeMott, ECF No. 86, PageID.4587:8–:19 (quoting UpToDate); id. ("[a]lthough shoulder dystocia is a major risk factor for brachial plexus injury, many cases of fractured clavicle or brachial plexus injury are not due to shoulder dystocia or excessive force by the provider.") (quoting UpToDate); see also Plourd, ECF No. 90-1, PageID.4957:3–:22 ("Data suggests that a significant proportion, 34 to 47 percent, of brachial plexus injuries are not associated with shoulder dystocia.") (quoting ACOG Practice Bulletin)).

**2. Plaintiff's Experts**

Plaintiff's experts, Dr. David Plourd and Dr. Fred Duboe, are obstetricians each with over thirty-five years of clinical practice experience. Dr. Plourd delivered over

5,000 babies when he practiced, taught obstetrics and gynecology for over 20 years, and served as a board examiner for the American Board of Ob/Gyn and the Medical Board of California. Dr. Duboe delivered over 8,000 babies during his career as an obstetrician and is currently in private practice. In addition, Dr. Duboe is a staff member at St. Alexis Medical Center where he has been Chairman of the Perinatal Advisory Committee since the 1980s. However, neither Dr. Plourd nor Dr. Duboe has any special qualifications in pediatrics, neonatology, neurology, or biomedical engineering. Neither has ever diagnosed or treated a brachial plexus injury and as obstetricians they are not qualified to do so. Neither has ever performed research or authored any peer-reviewed literature on shoulder dystocia or brachial plexus injuries.

Plaintiff's experts did not identify any specific facts in this case indicating that H.P.'s brachial plexus palsy was likely caused by excessive clinician-applied traction. They also ignored the effect of Williams' pushing during the shoulder dystocia, even though Dr. Plourd admitted that maternal pushing during the shoulder dystocia causes the baby's shoulder to impact against the mother's pubic bone, making the impaction worse as well as making it more difficult to resolve the shoulder dystocia. (Plourd, ECF No. 90-1, PageID.4919:3–:7). Instead, their opinions regarding causation are based entirely on their review of the medical literature. However, their characterization of the medical literature is unreliable.

Dr. Plourd asserted that, based on his review of the medical literature, 90 to 94 percent of all persistent brachial plexus injuries are caused by excessive clinician-

applied traction; therefore, someone must have applied excessive traction in this case. (Plourd, ECF No. 90-1, PageID.4934:4–:10). However, Plourd's statistic is not published in any peer-reviewed literature. (Id., PageID.4940:17–4941:13; see also Duboe, ECF No. 84, PageID.4315:18–4316:23). It is a result of Dr. Plourd combining portions of several articles, but he could not identify which articles he used, how many articles he used, or explain what method he used to combine them. (Plourd, ECF No. 90-1, PageID.4941:14–4943:14). When confronted with two articles he cited in support of his theory, he conceded that one article contradicted his opinion and he was not familiar enough with the other to discuss its conclusions. (Id., PageID.4938:1–4939:18 (agreeing that the conclusion of one article is that "most cases" of brachial plexus injury at delivery "are due to trauma at delivery that is not necessarily excessive or inappropriate."); PageID.4990:10– 4991:20 ("I can't speak to parts of the article that I just don't know")).

Further, plaintiff's experts' theory is not internally consistent. For instance, Dr. Duboe and Dr. Plourd rely on a distinction between transient and persistent brachial plexus injuries and, based on that distinction, disregard a large body of peer-reviewed literature that disputes their theory. (See Duboe, ECF No. 84, PageID.4317:3–:6; Plourd, ECF No. 90-1, PageID.4960:21–4961:24 (stating that he believes there are only 12 causes of persistent brachial plexus injury, but many more causes of transient injuries)). However, Dr. Plourd conceded that there is insufficient scientific evidence to

support a clear division between the causes of transient and permanent brachial plexus injuries. (Plourd, ECF No. 90-1, PageID.4961:14–:24).

Similarly, plaintiff's experts did not faithfully apply the methodology they claim supports their theory. Plaintiff's experts claimed to use a "differential diagnosis" to show that the severity and persistence of the injury itself indicates that it must have been caused by excessive traction. (Plourd, PageID.4894:17–4895:1 ("I've considered the full differential diagnosis."); Duboe, ECF No. 84, PageID.4320:10–:24 ("I ruled out those other issues that could potentially explain a permanent injury . . ."). However, neither of plaintiff's experts has the expertise to evaluate the differential diagnosis for a brachial plexus injury. (Plourd, ECF No. 90-1, PageID.4919:13–4921:17; Duboe, ECF No. 84, PageID.4305:3–:11). And, even if plaintiff's experts were qualified, both of plaintiff's experts conspicuously omitted maternal forces from their differential diagnosis. (Duboe, ECF No. 84, PageID.4320:10–:24 (omitting maternal forces from his list of possible causes); Plourd, ECF No. 90-1, PageID.4894:17–4895:4). Meanwhile, ACOG—the governing body of their profession—has issued an extensive monograph on this very issue and concluded that maternal forces are certainly a potential cause of persistent brachial plexus injuries. Other courts have rejected similar expert testimony. *Lawrey*, 751 F.3d at 952 (8th Cir. 2014) (rejecting an obstetrician's testimony that relied on a "differential diagnosis" to conclude that excessive traction was the likely cause of a brachial plexus injury); *Kawache*, 2011 WL 441684, at * 12 (same).

On these points, plaintiff's experts acknowledged that their opinions are contradicted by the ACOG monograph and the other medical literature admitted at trial. (Plourd, ECF No. 90-1, PageID.4961:5–:24, 4967:21–4969:9, 4970:1–:25; Duboe, ECF No. 84, PageID.4316:24–4317:15). In response, plaintiff's experts did not offer or admit any medical literature of their own to support their theory.

**3. Defendant's Experts**

Defendant offered two liability experts at trial. Dr. Robert DeMott is an obstetrician with decades of clinical experience. He has also published several peer-reviewed articles on shoulder dystocia and neonatal brachial plexus palsy. Michelle Grimm, Ph.D., is a biomedical engineer. She has written numerous peer-reviewed articles on the issues of shoulder dystocia and neonatal brachial plexus palsy and she authored portions of the ACOG monograph specifically dealing with the cause of these injuries.

Both of defendant's experts testified consistent with the ACOG monograph. For example, Dr. Grimm testified that "in [] a shoulder dystocia, the shoulder is stopped, the maternal forces . . . push the spine upwards . . . through the neck, . . . [a]s those forces continue to move the baby's spine, neck, and head forward, with a shoulder held back, it widens the angle between the shoulder and the neck, and it stretches the brachial plexus." (Grimm, ECF No. 87, PageID.4707:8–4708:2; *see also* DeMott, ECF No. 86, PageID.4576:10–:21, 4579:3–:12).

In addition, defendant's experts identified several facts in this case that indicated the injury was caused by maternal forces that Dr. Troya could not control. Specifically, the second stage of labor in this case was very short, which indicates that the maternal forces were possibly greater than average. (DeMott, ECF No. 86, PageID.4592:25–4593:8; Grimm, ECF No. 87, PageID.4729:22–4730:6). In addition, the child was very large—in the 97th percentile for weight. Larger babies do not rotate their shoulders as readily and have a higher risk of staying in the vertical plane as they move through the birth canal. (DeMott, ECF No. 86, PageID.4593:9–:14; Grimm, ECF No. 87, PageID.4718:6–:16, 4762:3–:15). Finally, the delivery was complicated by a shoulder dystocia, which is itself a risk factor for brachial plexus injury, and the shoulder dystocia was prolonged, severe, and the mother continued to push and move while Dr. Troya was trying to resolve the obstruction. (DeMott, ECF No. 86, PageID.4593:15–4594:15; Grimm, ECF No. 87, PageID.4734:16–:23). Each of these are risk factors that could lead H.P. to suffer a brachial plexus injury, regardless of any action taken by the obstetrician. (DeMott, ECF No. 86, PageID.4592:25–4594:15).

The medical literature demonstrates that H.P.'s injury is a type that can occur even when the obstetrician properly manages a shoulder dystocia. Defendant's experts' testimony was consistent with the medical literature admitted at trial and it was based on a fact-specific analysis of the evidence. In contrast, plaintiff's experts' theory was not supported by any reliable medical literature (it was, in fact, contradicted by medical literature they concede is reliable) and they did not base their opinion on the

facts of this particular case. Accordingly, the evidence at trial showed that H.P.'s injury in this case was caused by the shoulder dystocia itself and Dr. Troya could not have prevented it.

**D. Damages**

Having concluded that plaintiff did not demonstrate a breach of the standard of care and has not shown that H.P.'s injuries were proximately caused by a breach of the standard of care, the court does not need to address the issue of damages in this case.

CONCLUSION

Plaintiff has failed to meet her burden to prove a breach of the standard of care by the defendant and proximate causation between the alleged breach and the injury in this case. Judgment shall enter on behalf of defendant.

Dated: April 17, 2020

s/George Caram Steeh
GEORGE CARAM STEEH
UNITED STATES DISTRICT JUDGE

CERTIFICATE OF SERVICE

Copies of this Order were served upon attorneys of record on April 17, 2020, by electronic and/or ordinary mail.

s/Brianna Sauve
Deputy Clerk